Supplementary table 1. The search strategy of the asymptomatic infections with COVID-19

Databases	Searches	Results
Pubmed	(((((((((severe acute respiratory syndrome coronavirus 2[Supplementary Concept]) OR COVID-19[Supplementary Concept]) OR COVID-19[Text Word]) OR SARS-CoV-2[Text Word]) OR coronavirus disease 2019[Text Word]) OR 2019-nCov[Text Word]) OR novel coronavirus[Text Word]) OR coronavirus[Text Word])) AND ((((("Asymptomatic Infections"[Mesh]) OR "Asymptomatic Diseases"[Mesh])) OR ((((((((((asymptomatic[Text Word]) OR covert infection[Text Word]) OR inapparent infection[Text Word]) OR Pre-symptomatic[Text Word]) OR Presymptomatic[Text Word]) OR Subclinical[Text Word]) OR preclinical[Text Word]) OR paucisymptomatic[Text Word]) OR oligosymptomatic[Text Word]) OR no symptoms[Text Word]))	**429**
Web of Science	(((((((((severe acute respiratory syndrome coronavirus 2) OR COVID-19) OR SARS-CoV-2) OR 2019-nCoV) OR coronavirus disease 2019) OR novel coronavirus) OR coronavirus))) AND ((((((((((asymptomatic) OR covert infection) OR inapparent infection) OR Pre-symptomatic) OR Presymptomatic) OR Subclinical) OR preclinical) OR paucisymptomatic) OR oligosymptomatic) OR no symptoms)))	**639**
medRxiv	(COVID-19 OR 2019-nCoV OR SARS-CoV-2 OR "novel coronavirus") AND (asymptomatic OR Pre-symptomatic OR presymptomatic OR covert infection)	**1108**
bioRxiv	(COVID-19 OR 2019-nCoV OR SARS-CoV-2 OR "novel coronavirus") AND (asymptomatic OR Presymptomatic OR pre-symptomatic OR covert infection)	**122**
Cochrane	(((((((severe acute respiratory syndrome coronavirus 2) OR COVID-19) OR SARS-CoV-2) OR coronavirus disease 2019) OR novel coronavirus) OR coronavirus)) in Title Abstract Keyword AND ((((((((((asymptomatic) OR covert infection) OR inapparent infection) OR Pre-symptomatic) OR Presymptomatic) OR Subclinical) OR preclinical) OR paucisymptomatic) OR oligosymptomatic) OR no symptoms))	**53**
CNKI	(SU=novel coronavirus OR SU=coronavirus disease 2019) AND (FT=asymptomatic OR FT= covert infection)	**797**
SinoMed	(novel coronavirus OR coronavirus disease 2019) AND (asymptomatic OR pre-symptomatic OR covert infection)	**114**
Wangfang	(novel coronavirus OR coronavirus disease 2019) AND (asymptomatic OR pre-symptomatic OR covert infection)	**52**
VP	(novel coronavirus OR coronavirus disease 2019) AND (asymptomatic OR pre-symptomatic OR covert infection)	**8**

Supplementary table 2. The studies and characteristics included in this meta-analysis

First author, Year	Journal	Study period	Region	Study population	Sample size	Study Quality
Tian S,2020[1]	medRxiv	Unclassified	China	Cluster	24	3
Tang A,2020[2]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	26	5
Cheng H-Y,2020[3]	medRxiv	Before 2020/02/29	China	Family cluster	32	5
Peng D,2020[4]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	35	4
Tian S,2020[5]	medRxiv	Unclassified	China	Epidemiological investigation	37	5

Liao J,2020[6]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	46	7
Hu K,2020[7]	medRxiv	Before 2020/02/29	China	Cluster	52	4
Miao C,2020[8]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	62	5
Xu Y,2020[9]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	69	8
Wu Q,2020[10]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	74	6
Song H,2020[11]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	83	6
Tabata S,2020[12]	medRxiv	Before 2020/02/29	Japan	Cluster	104	5
Qiu C,2020[13]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	104	6

Guo A-X[14]	medRxiv	Unclassified	China	Epidemiological investigation	118	5
Luo L,2020[15]	medRxiv	Before 2020/02/29	China	Close contacts of patients	129	7
Ping K,2020[16]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	162	5
Tao Y,2020[17]	medRxiv	Unclassified	China	Epidemiological investigation	167	5
Jing Q-L,2020[18]	medRxiv	Before 2020/02/29	China	Cluster	335	5
Gupta N,2020[19]	Monaldi archives for chest disease	Unclassified	India	Epidemiological investigation	21	7
Ma HJ,2020[20]	Chinese Journal of Radiology	Before 2020/02/29	China	Epidemiological investigation	22	8
Cheng HY,2020[21]	JAMA internal medicine	Unclassified	China	Close contacts of patients and Epidemiological investigation	122	8
Zhang JZ,2020[22]	Chinese Journal of Epidemiology	Before 2020/02/29	China	Cluster	22	7

Wang L,2020[23]	Clinical Epidemiology	Before 2020/02/29	China	Epidemiological investigation	26	7
Dong YY,2020[24]	Journal of Clinical Medicine in Practice	Before 2020/02/29	China	Epidemiological investigation	37	7
Brslin N,2020[25]	American journal of obstetrics & gynecology MFM	After 2020/02/29	The United States	Epidemiological investigation	43	8
Pang DX,2020[26]	Chinese Journal of Public Health	Before 2020/02/29	China	Cluster	60	8
Garcia-Basteiro AL,2020[27]	medRxiv	After 2020/02/29	Spain	Epidemiological investigation	65	8
Mao Z-Q,2020[28]	International journal of infectious diseases	Unclassified	China	Epidemiological investigation	78	7
Wang AH,2020[29]	Chinese Journal of Infection Control	Unclassified	China	Epidemiological investigation	90	6
Yu CC,2020[30]	Chinese Journal of Radiology	Before 2020/02/29	China	Epidemiological investigation	91	9

Wang R,2020[31]	International journal of infectious diseases	Before 2020/02/29	China	Epidemiological investigation	125	7
Niu S,2020[32]	Archives of gerontology and geriatrics	Before 2020/02/29	China	Epidemiological investigation	141	7
Wan Q,2020[33]	Chinese Journal of Clinical Infectious Diseases	Before 2020/02/29	China	Epidemiological investigation	153	8
Ding KQ,2020[34]	Chinese Journal of Public Health	Unclassified	China	Cluster	166	7
Yu HS,2020[35]	Journal of Tuberculosis and Lung Health	Before 2020/02/29	China	Epidemiological investigation	250	7
Bi Q,2020[36]	Lancet Infect Dis	Before 2020/02/29	China	Epidemiological investigation	391	6
Xiao TY,2020[37]	medRxiv	Unclassified	China	Epidemiological investigation	449	7
Min B,2020[38]	Clinical focus	Unclassified	China	Epidemiological investigation	472	7

Ji T,2020[39]	Clinical infectious diseases	Unclassified	China	Epidemiological investigation	1015	7
Lavezzo,2020[40]	medRxiv	After 2020/02/29	Italy	Epidemiological investigation	73	8
Ki M,2020[41]	Epidemiol Health	Before 2020/02/29	Republic of Korea	Family cluster	28	8
Day M,2020[42]	Bmj	After 2020/02/29	China	Epidemiological investigation	166	3
He G,2020[43]	J Med Virol	Before 2020/02/29	China	Epidemiological investigation	206	8
Dong Y,2020[44]	Pediatrics	Before 2020/02/29	China	Epidemiological investigation	728	7
Li Y,2020[45]	Journal of Shandong University (Health Sciences)	Before 2020/02/29	China	Epidemiological investigation	28	9
Zhong FY,2020[46]	Medical Journal of Wuhan University	Unclassified	China	Epidemiological investigation	30	9
Wang YR,2020[47]	Chinese Journal of Infectious Disease	Before 2020/02/29	China	Epidemiological investigation	30	9
Wang S,2020[48]	Chinese Journal of Infection Control	Before 2020/02/29	China	Close contacts of patients	70	9

Zhang DL,2020[49]	Preventive Medicine	Before 2020/02/29	China	Cluster	187	9
Chen YJ,2020[50]	Journal of Third Military Medical University	Before 2020/02/29	China	Epidemiological investigation	143	9
Zhao SL,2020[51]	Practical Preventive Medicine	Before 2020/02/29	China	Cluster	664	9
Gao T,2020[52]	Chinese Journal of Respiratory and Critical Care Medicine	Before 2020/02/29	China	Epidemiological investigation	40	9
Pan XQ,2020[53]	Journal of Wenzhou Medical University	Before 2020/02/29	China	Epidemiological investigation	64	9
Liu GT,2020[54]	Journal of Ningxia Medical University	Before 2020/02/29	China	Epidemiological investigation	70	9
Mao YL,2020[55]	Chinese Journal of Contemporary Pediatrics	Unclassified	China	Epidemiological investigation	115	9
OU JM,2020[56]	Chinese Journal of Zoonoses	Before 2020/02/29	China	Epidemiological investigation	296	9
Hu SX,2020[57]	Practical Preventive Medicine	Before 2020/02/29	China	Epidemiological investigation	888	9
Lin JF,2020[58]	Preventive Medicine	Before 2020/02/29	China	Epidemiological investigation	1284	9
Wang D,2020[59]	Chinese Journal of Pediatrics	Before 2020/02/29	China	Epidemiological investigation	31	7
Bin YF,2020[60]	Journal of Guangxi Medical University	Before 2020/02/29	China	Epidemiological investigation	55	8

Cao PM,2020[61]	Journal of Southwest University (Natural Science Edition)	Before 2020/02/29	China	Epidemiological investigation	223	8
Tian SJ,2020[62]	Journal of Infection	Before 2020/02/29	China	Epidemiological investigation	262	9
Zhou X,2020[63]	Clinical Microbiology and Infection	Before 2020/02/29	China	Epidemiological investigation	328	6
Sun WW,2020[64]	Chinese Journal of Preventive Medicine	Before 2020/02/29	China	Family cluster	391	8
Wang X,2020[65]	Clinical Microbiology and Infection	Before 2020/02/29	China	Epidemiological investigation	1012	10
Wu HP,2020[66]	Chinese Journal of Contemporary Pediatrics	Before 2020/02/29	China	Cluster	23	10
He T,2020[67]	International Journal of Medical Radiology	Before 2020/02/29	China	Epidemiological investigation	24	8
Deng ZQ,2020[68]	Chinese Journal of Epidemiology	Before 2020/02/29	China	Close contacts of patients	25	9
Chau NVV,2020[69]	medRxiv	After 2020/02/29	Vietnam	Epidemiological investigation	30	8
Xu H,2020[70]	medRxiv	Before 2020/02/29	China	Epidemiological investigation	32	8
MM Arons,2020[71]	The New England journal of medicine	After 2020/02/29	The United States	Cluster	48	9

Cao L,2020[72]	Chinese Journal of Epidemiology	Before 2020/02/29	China	Epidemiological investigation	63	8
Yan J,2020[73]	American journal of obstetrics and gynecology	Unclassified	China	Epidemiological investigation	65	9
Park SY,2020[74]	Emerging infectious diseases	Unclassified	Republic of Korea	Close contacts of patients	97	9
Lu X,2020[75]	Shanghai Journal of Traditional Chinese Medicine	Before 2020/02/29	China	Epidemiological investigation	100	9
Imai K,2020[76]	medRxiv	Unclassified	Japan	Epidemiological investigation	112	8
Chen QQ,2020[77]	Infection	Unclassified	China	Epidemiological investigation	145	9
Xu TM,2020[78]	J Med Virol	Before 2020/02/29	China	Epidemiological investigation	342	10
Barrett ES,2020[79]	medRxiv	After 2020/02/29	The United States	Epidemiological investigation	41	9
Qasim M,2020[80]	medRxiv	Unclassified	Japan	Epidemiological investigation	1192	7
Ma HX,2020[81]	Chinese Journal of Microbiology and Immunology	Before 2020/02/29	China	Epidemiological investigation	1277	8
Yongchen Z,2020[82]	Emerg Microbes Infect	Unclassified	China	Epidemiological investigation	21	9

Lucy Rivett MBBS,2020[83]	medRxiv	After 2020/02/29	The United Kingdom	Epidemiological investigation	30	7
Ma Y,2020[84]	Microbes Infect	Unclassified	China	Epidemiological investigation	47	8
Chaw LL2020[85]	medRxiv	After 2020/02/29	Brunei Darussalam	Cluster	71	7
Liu BY,2020[86]	Preventive Medicine	After 2020/02/29	China	Epidemiological investigation	91	8
Lu YY,2020[87]	Pediatr Infect Dis J	Unclassified	China	Epidemiological investigation	110	8
Lei MY,2020[88]	Chinese Journal of Public Health	Unclassified	China	Cluster	127	8
Xiong F,2020[89]	Journal of the American Society of Nephrology	Unclassified	China	Epidemiological investigation	131	8
Wong J,2020[90]	J Travel Med	After 2020/02/29	Brunei Darussalam	Epidemiological investigation	138	5
Lombardi A,2020[91]	medRxiv	Unclassified	Italy	Epidemiological investigation	138	7
Streeck H,2020[92]	medRxiv	After 2020/02/29	German	Epidemiological investigation	142	7

Shabrawishi M,2020[93]	medRxiv	Unclassified	Saudi Arabia	Epidemiological investigation	150	8
Xiong X,2020[94]	medRxiv	Unclassified	China	Epidemiological investigation	244	8
Jing QL,2020[95]	Chinese Journal of Epidemiology	Unclassified	China	Epidemiological investigation	349	7
Robilotti EV,2020[96]	medRxiv	After 2020/02/29	The United States	Epidemiological investigation	530	7
Ye Y,2020[97]	Chinese Journal of Public Health	Before 2020/02/29	China	Cluster	708	7
Kimball A,2020[98]	Morbidity and Mortality Weekly Report	After 2020/02/29	The United States	Cluster	23	10
Kim ES,2020[99]	J Korean Med Sci	Before 2020/02/29	Republic of Korea	Epidemiological investigation	28	8
Qiu HY,2020[100]	Lancet Infect Dis	Before 2020/02/29	China	Epidemiological investigation	36	8

Ling Z,2020[101]	European Journal of Radiology	Before 2020/02/29	China	Epidemiological investigation	49	8
Luo SH,2020[102]	Chin Med J (Engl)	Before 2020/02/29	China	Epidemiological investigation	83	7
McMichael TM,2020[103]	The new england journal of medicine	After 2020/02/29	The United States	Cluster	167	8
Kim GU,2020[104]	Clinical Microbiology and Infection	After 2020/02/29	Republic of Korea	Epidemiological investigation	213	7

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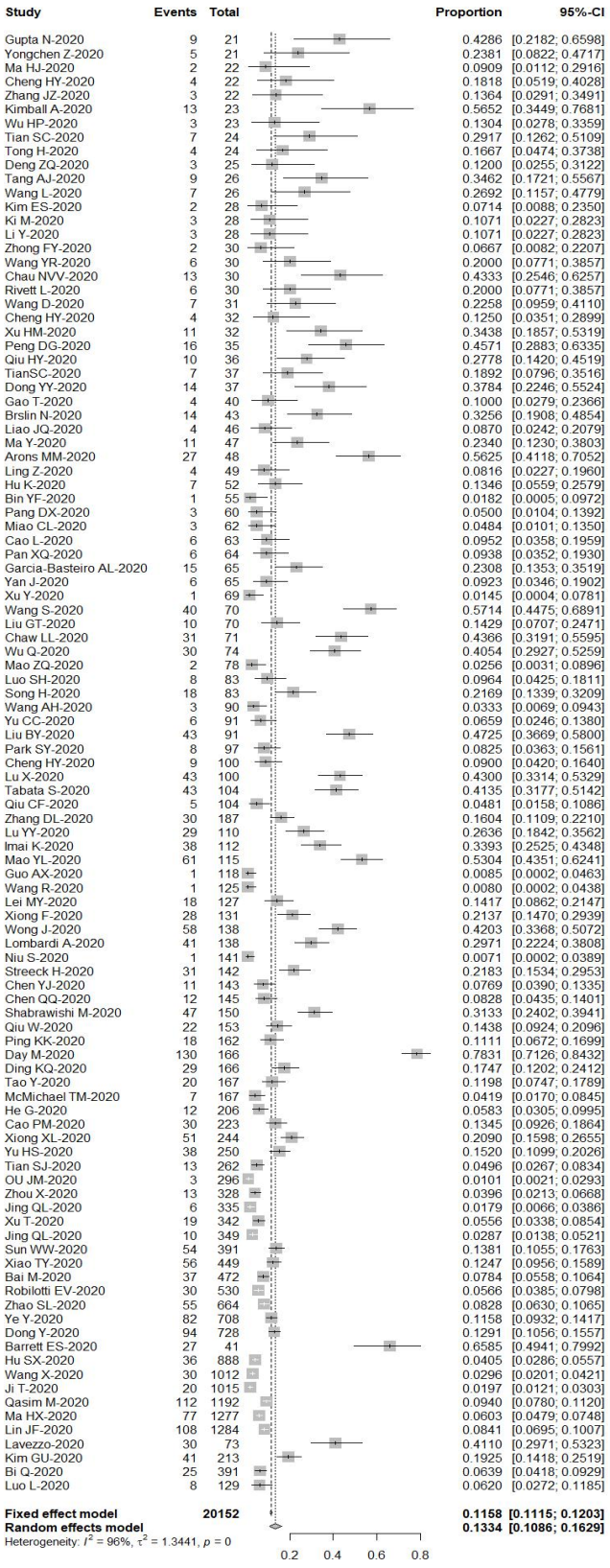
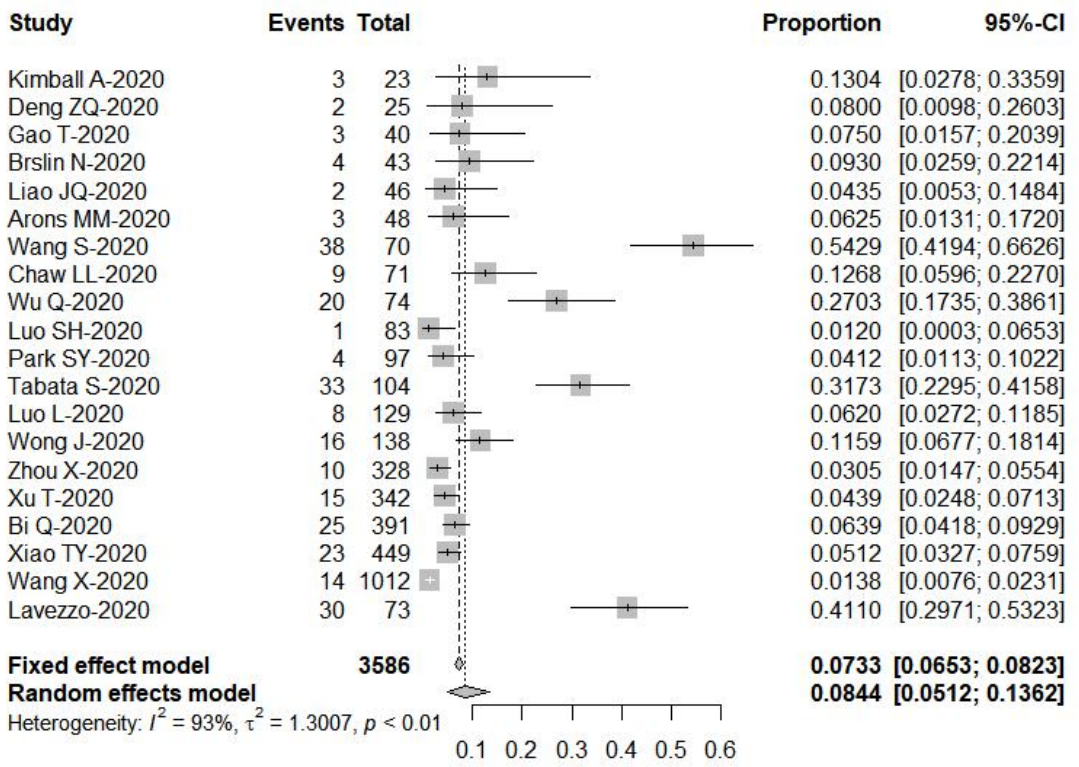
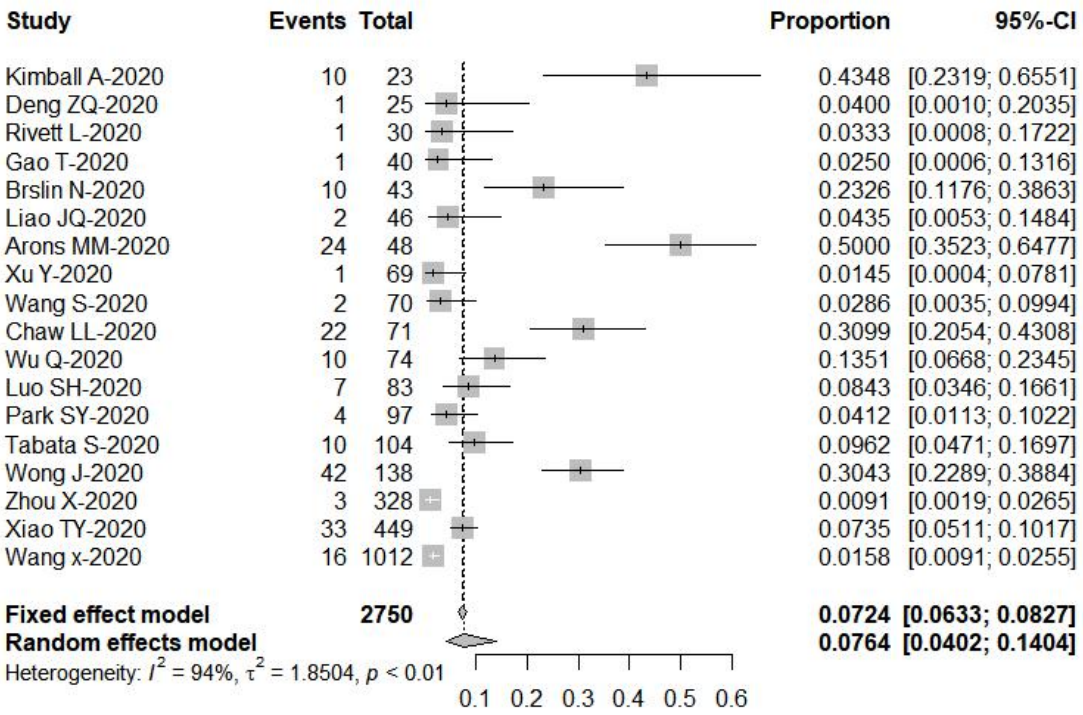


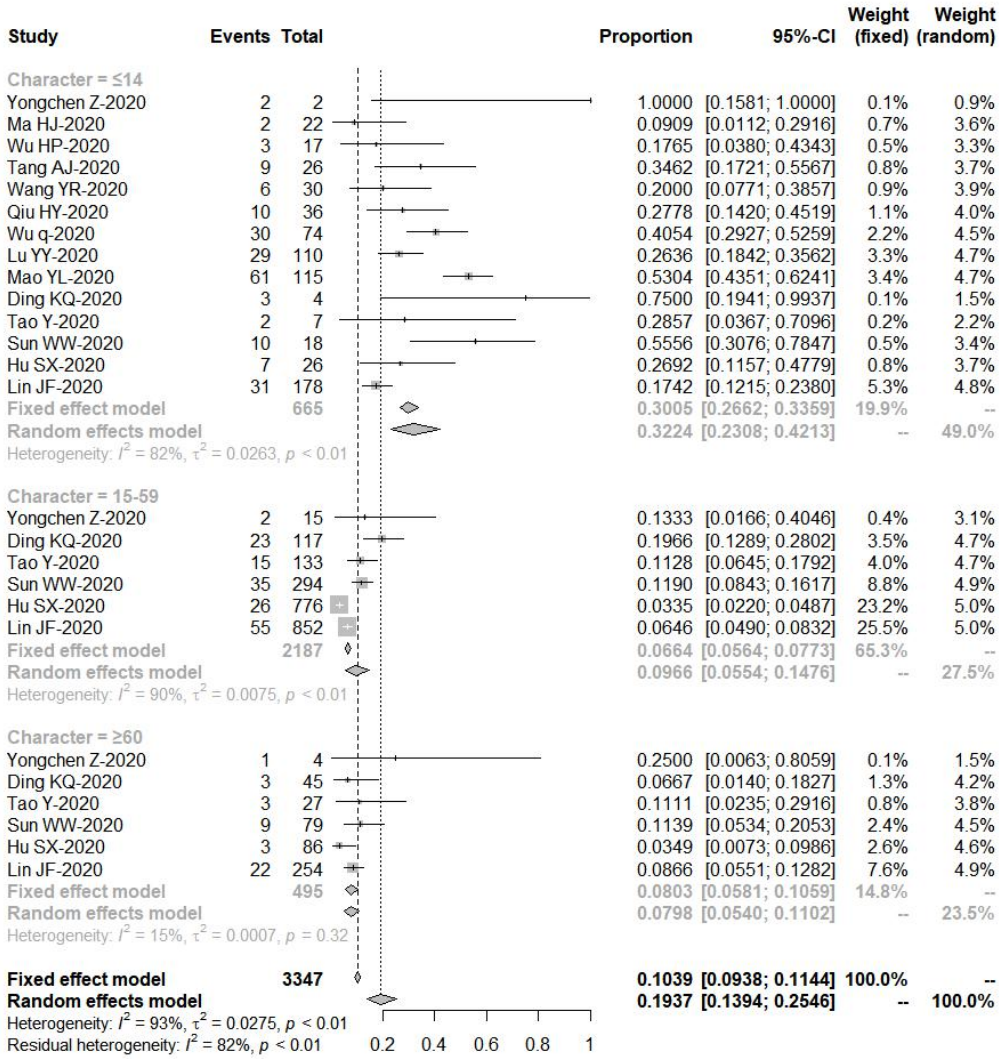
Supplementary figure 1A. Forest plots of meta-analysis on the proportion of the asymptomatic individuals among the COVID-19 infections



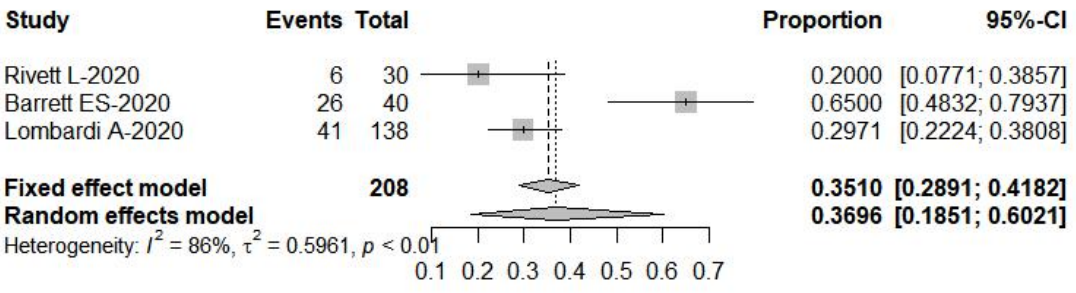
Supplementary figure 1B. Forest plots of meta-analysis on the proportion of the covert infections among the COVID-19 infections



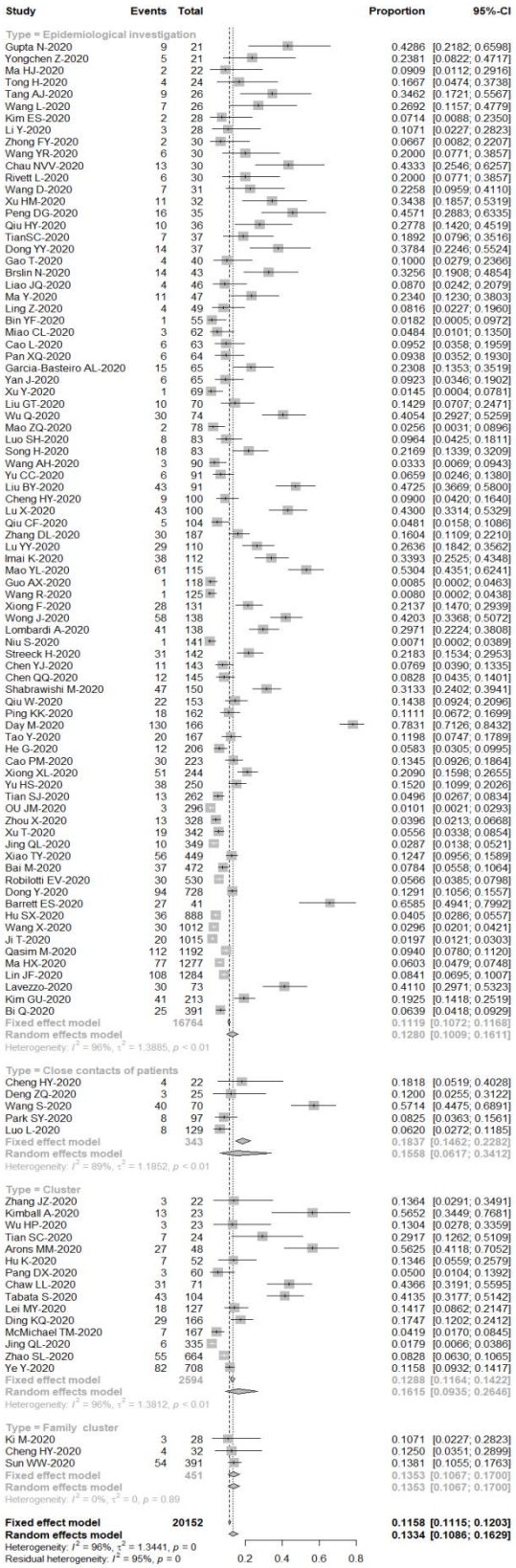
Supplementary figure 1C. Forest plots of meta-analysis on the proportion of the pre-symptomatic among the COVID-19 infections



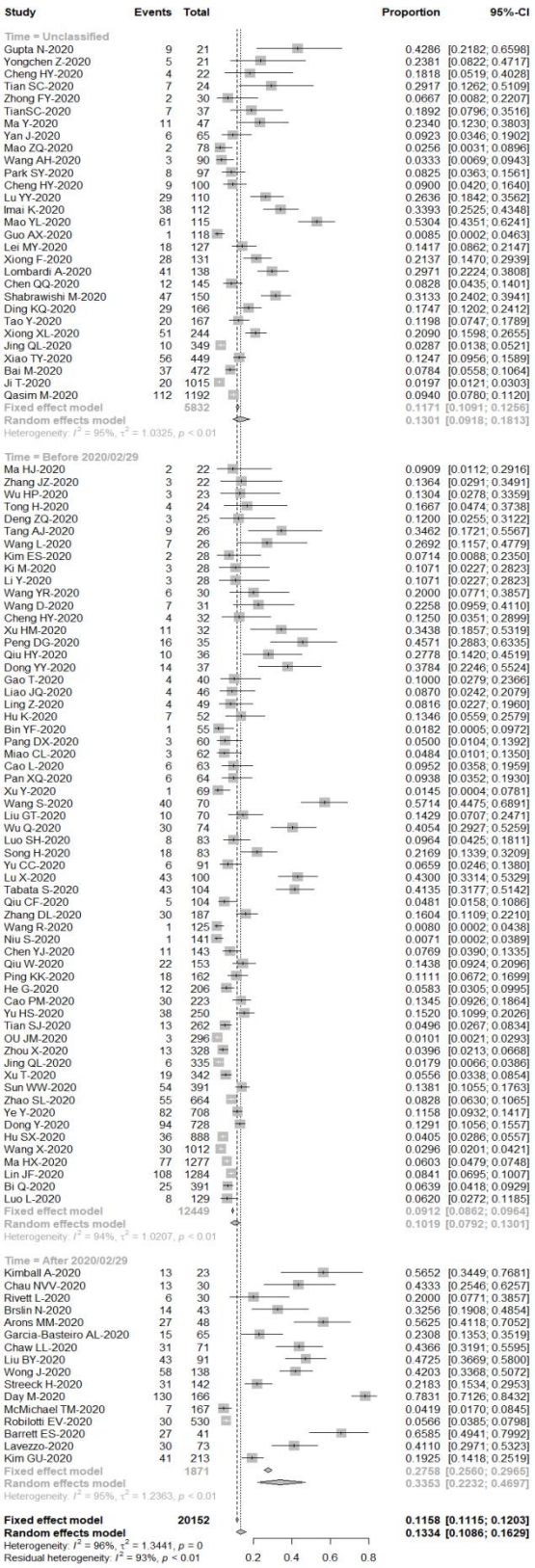
Supplementary figure 2A. Forest plots of meta-analysis on the proportion of the age group of asymptomatic individuals among the COVID-19 infections



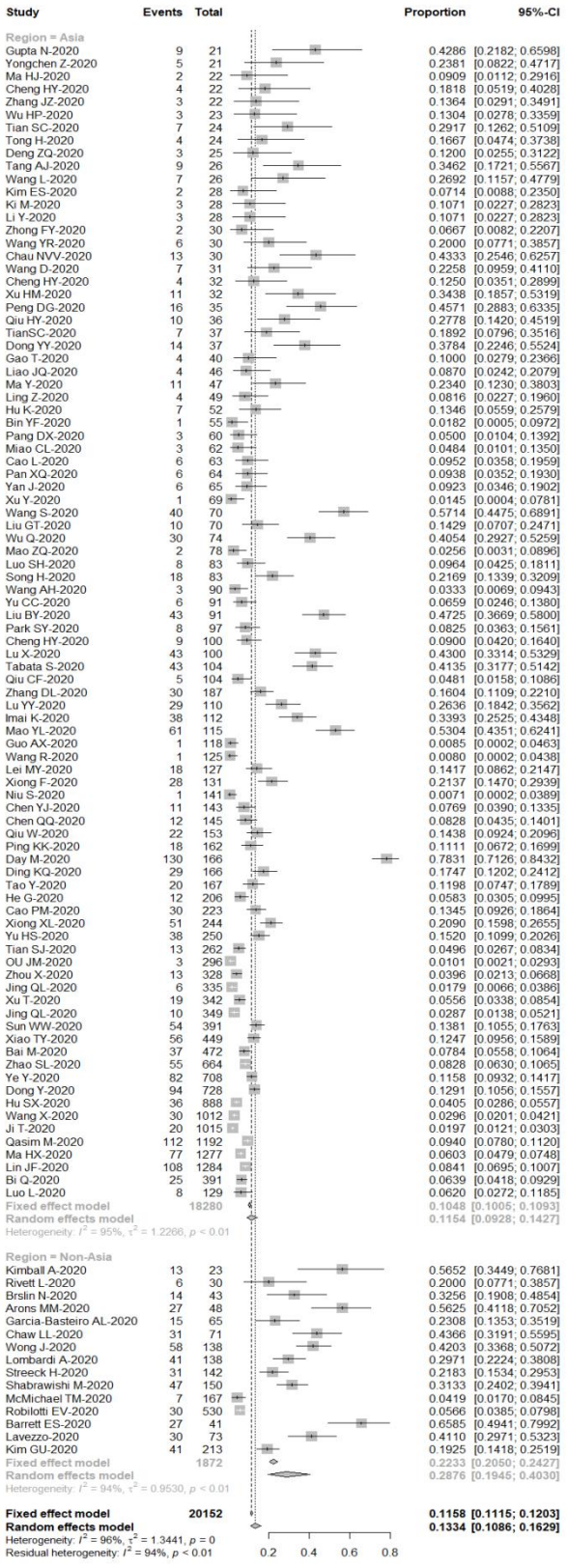
Supplementary figure 2B. Forest plots of meta-analysis on the proportion of the healthcare workers of asymptomatic individuals among the COVID-19 infections



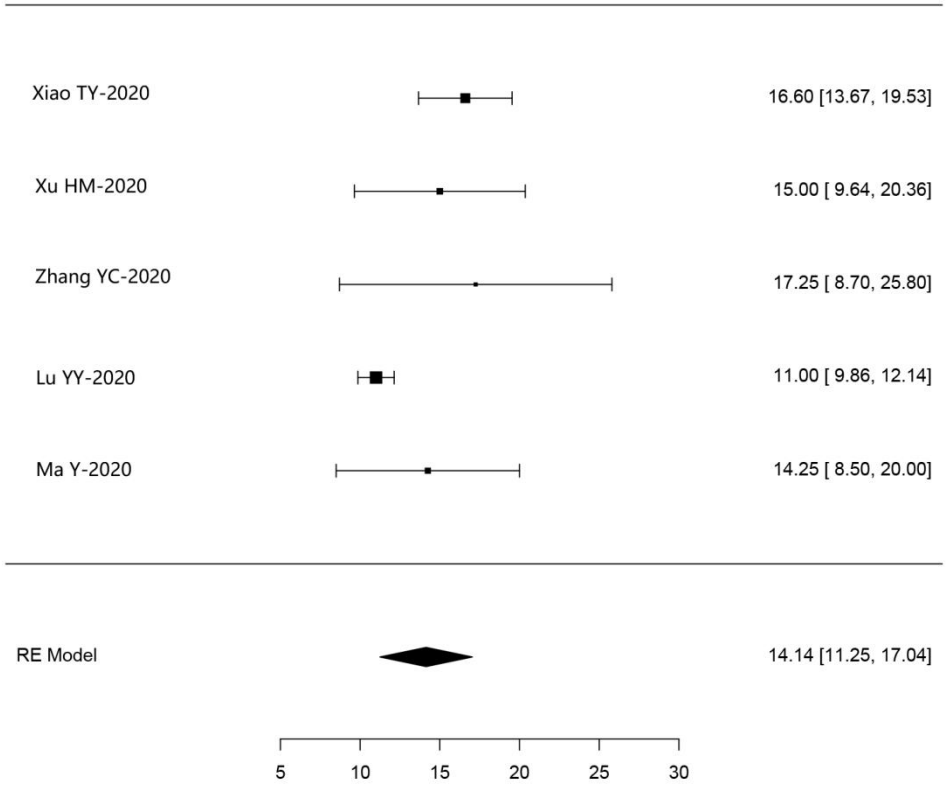
Supplementary figure 2C. Forest plots of meta-analysis on the proportion of the study population of asymptomatic individuals among the COVID-19 infections



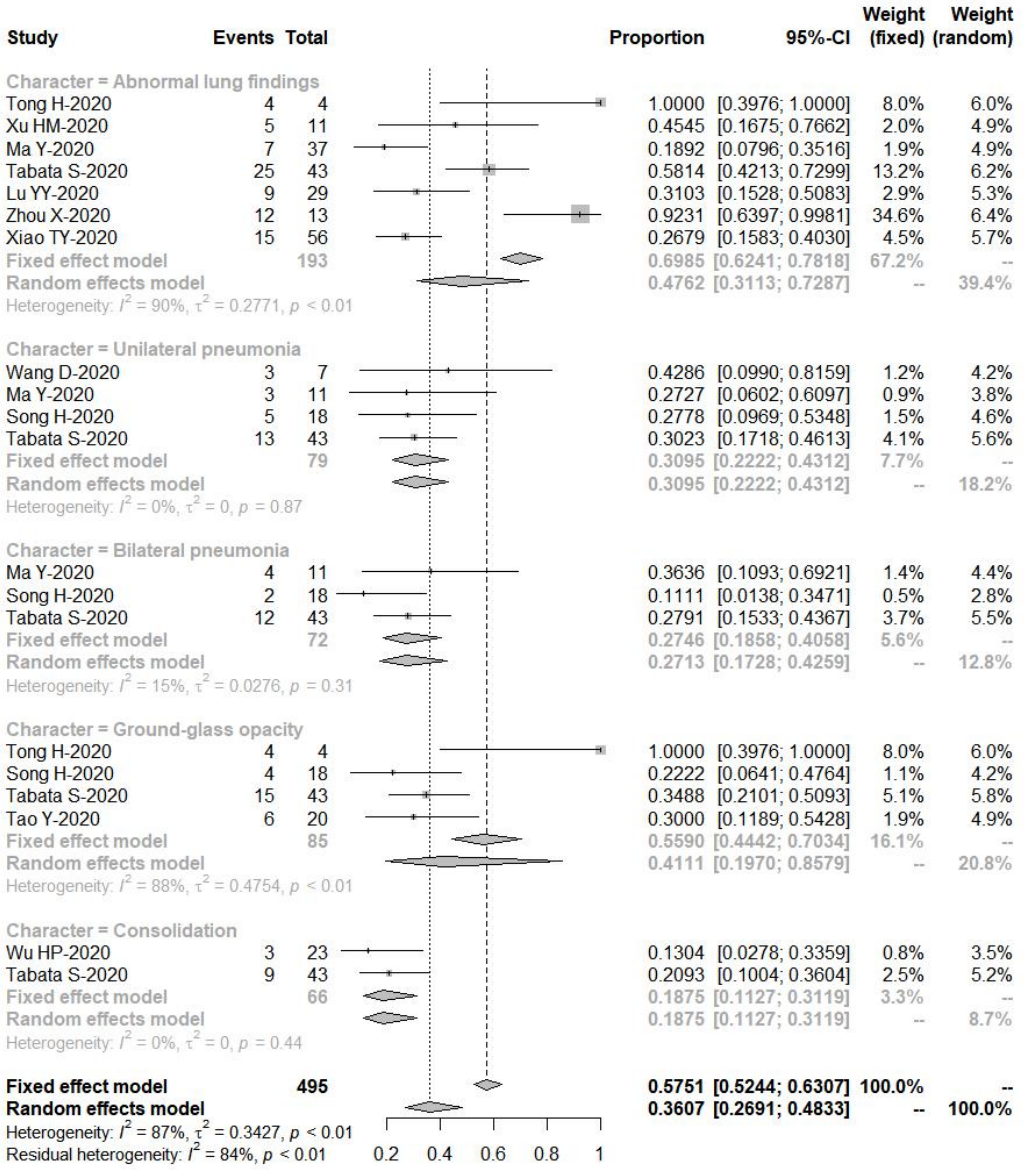
Supplementary figure 2D. Forest plots of meta-analysis on the proportion of the study periods of asymptomatic individuals among the COVID-19 infections



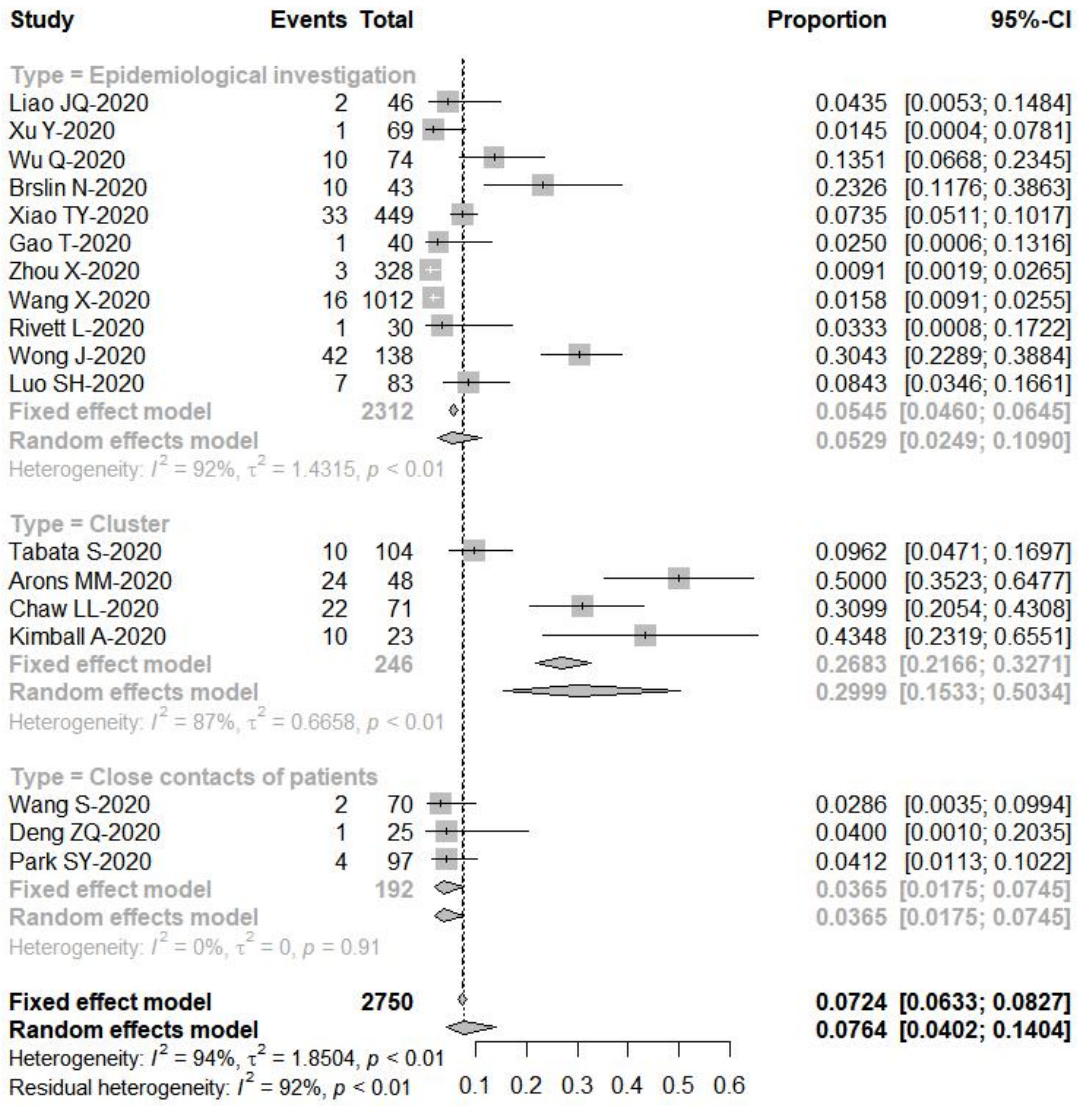
Supplementary figure 2E. Forest plots of meta-analysis on the proportion of the regions among the of asymptomatic individuals COVID-19 infections



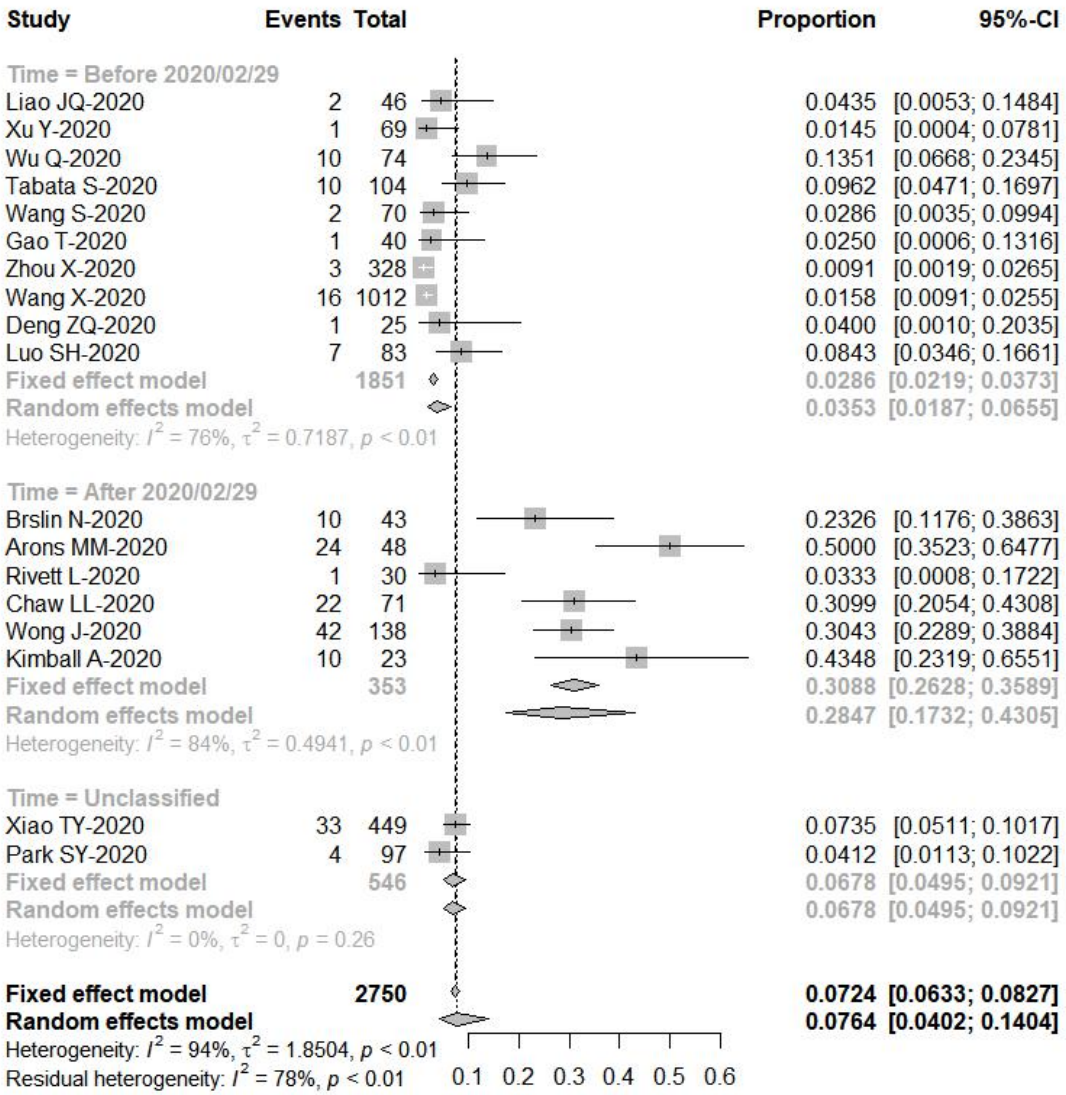
Supplementary figure 3A. Forest plots of meta-analysis on the the time of viral shedding among the asymptomatic individuals



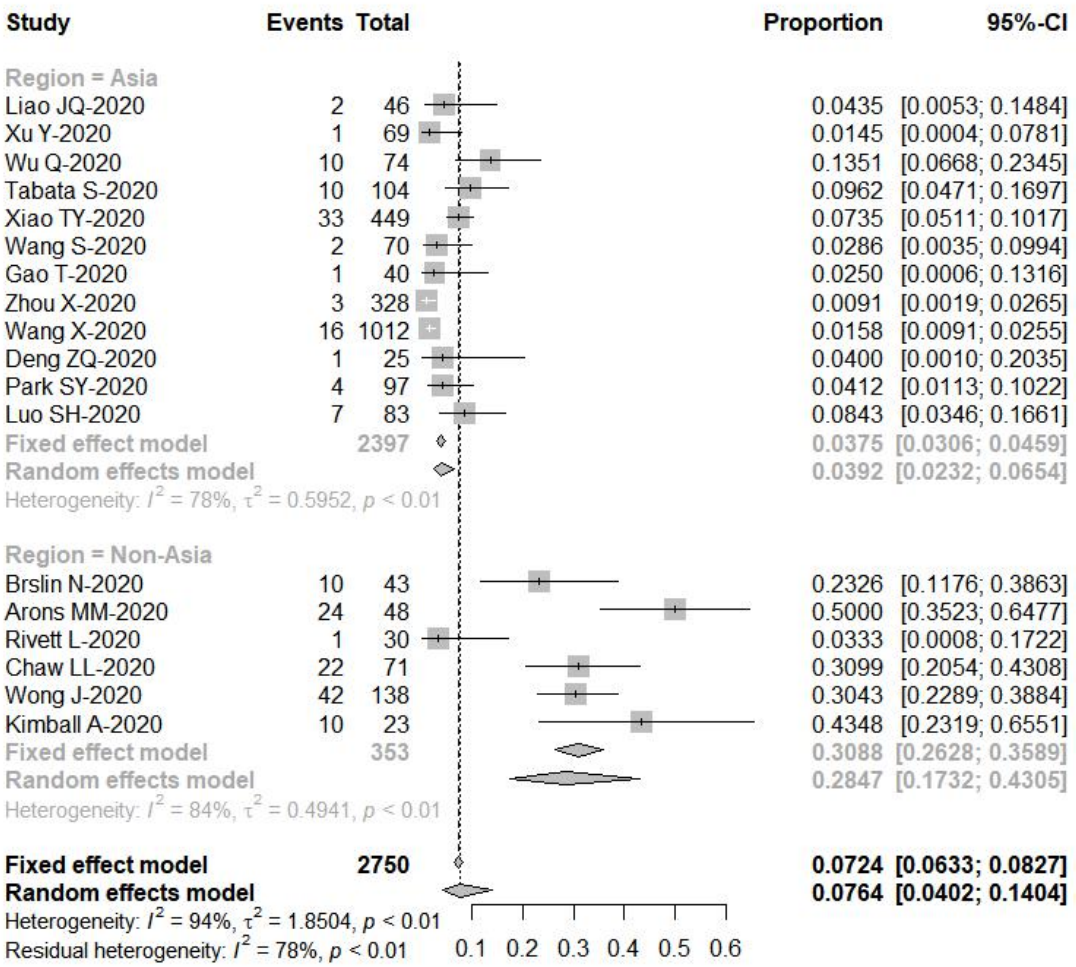
Supplementary figure 3B. Forest plots of meta-analysis on the proportion of the radiographical findings among the asymptomatic individuals



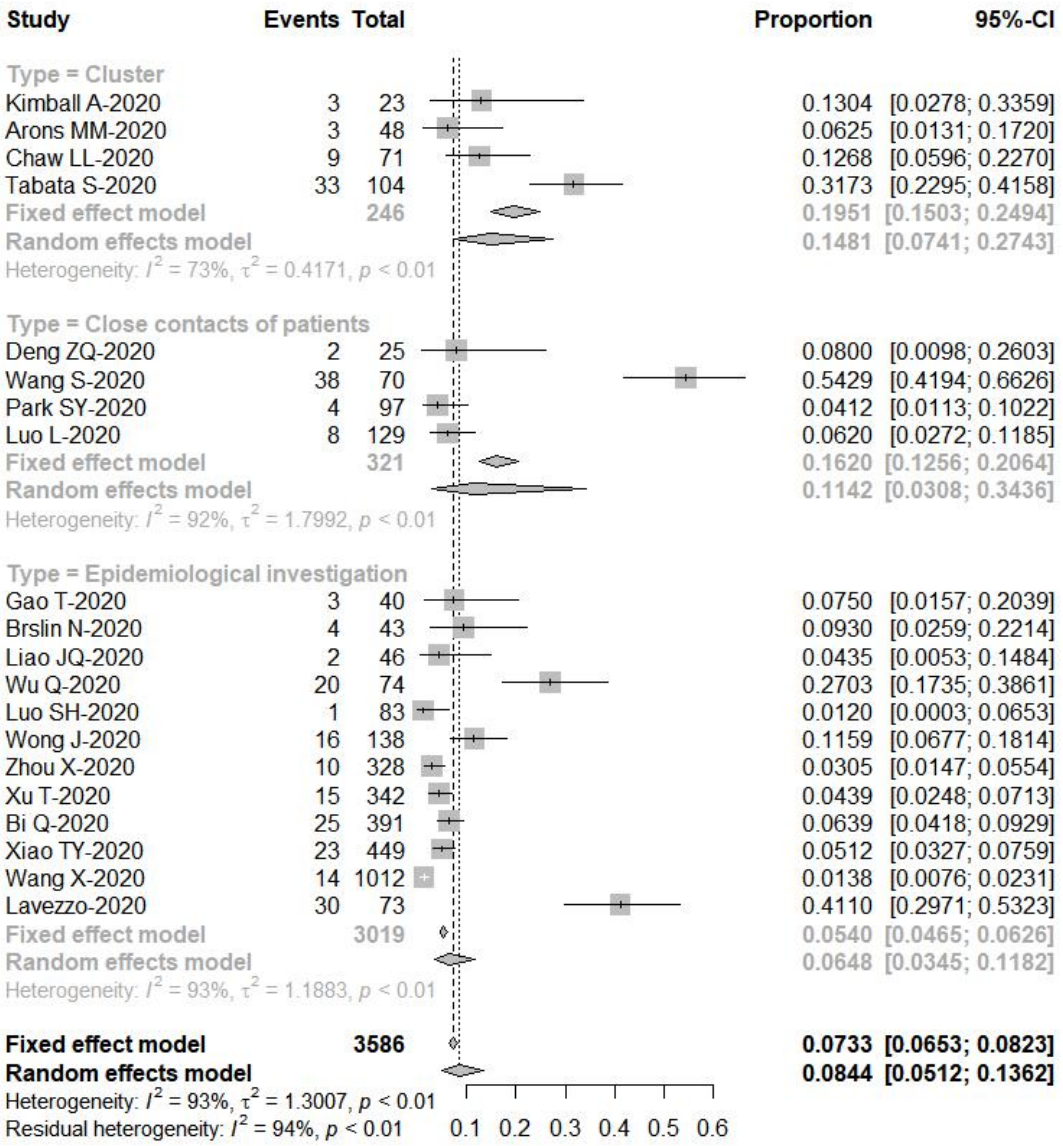
Supplementary figure 4A. Forest plots of meta-analysis on the proportion of the study population of pre-symptomatic infections among the COVID-19 infections



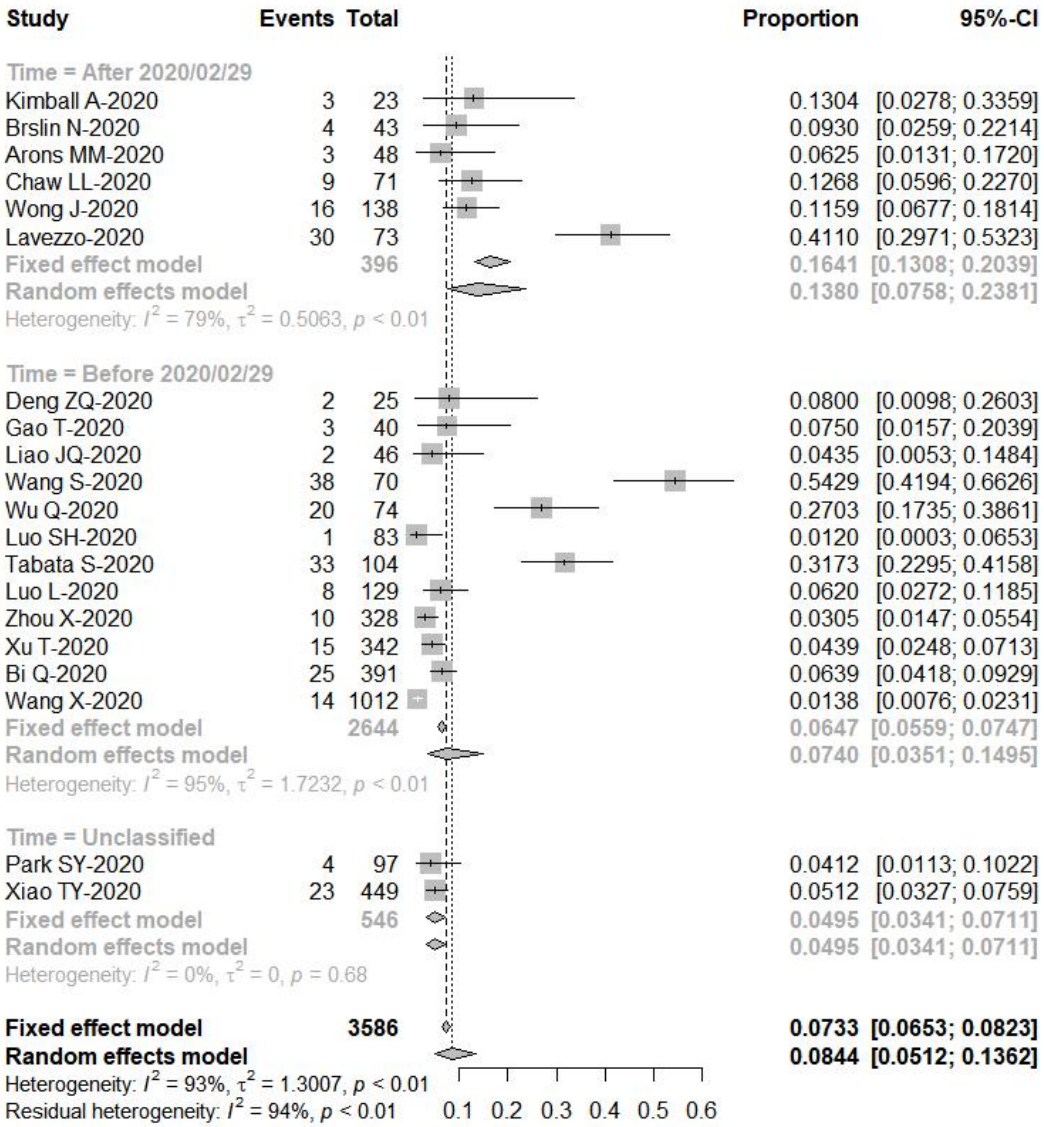
Supplementary figure 4B. Forest plots of meta-analysis on the proportion of the study periods of pre-symptomatic infections among the COVID-19 infections



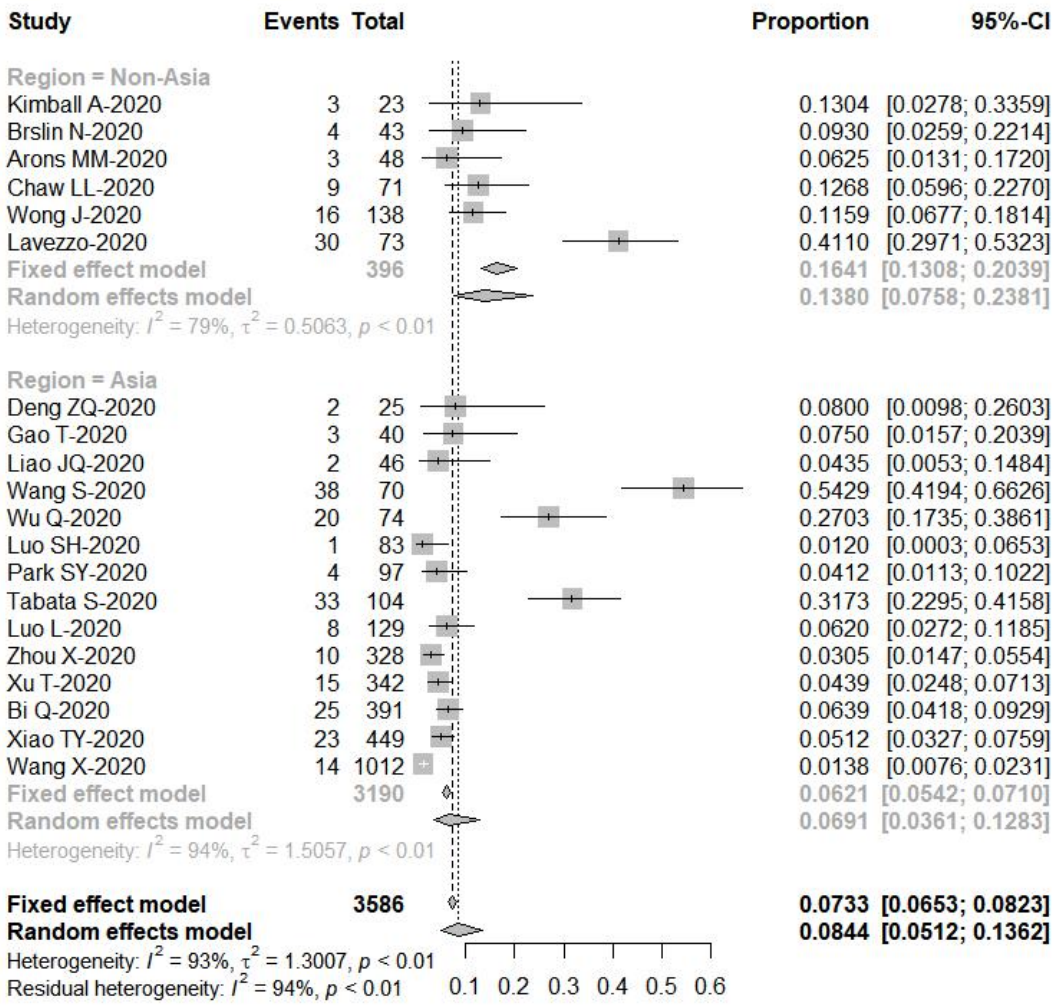
Supplementary figure 4C. Forest plots of meta-analysis on the proportion of the regions of pre-symptomatic infections among the COVID-19 infections



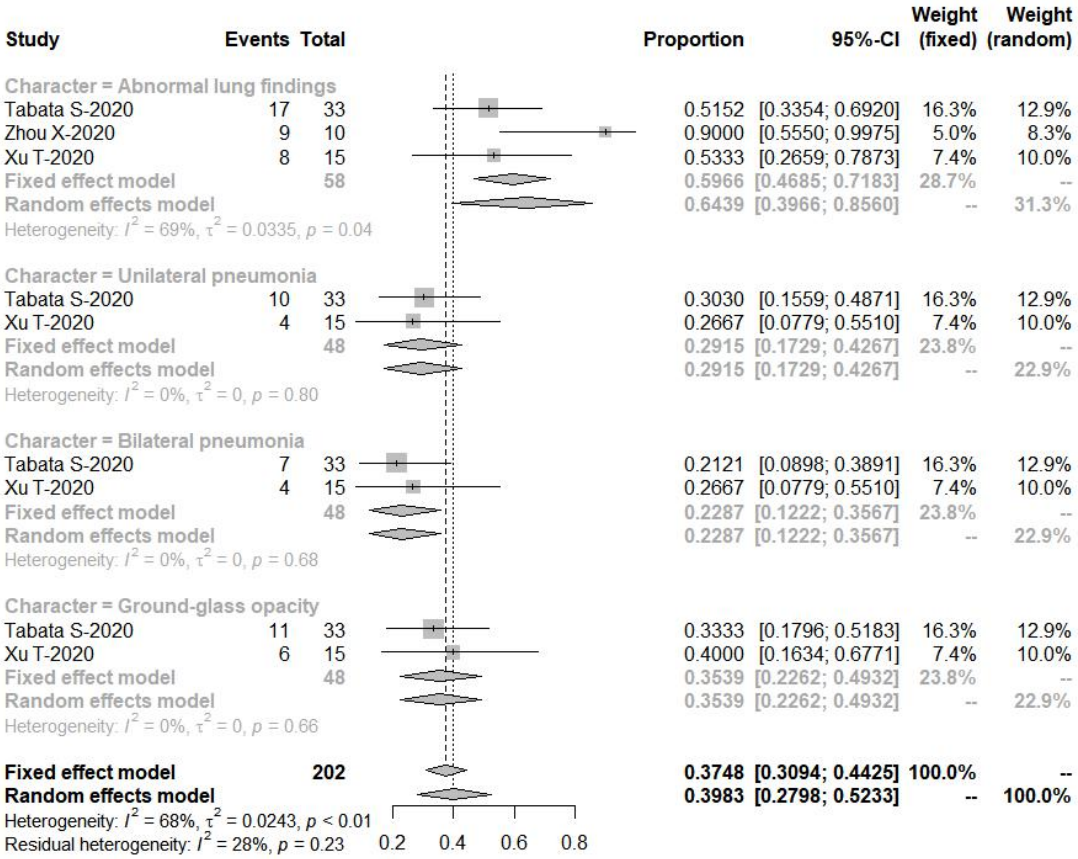
Supplementary figure 5A. Forest plots of meta-analysis on the proportion of the study population of covert infections among the COVID-19 infections



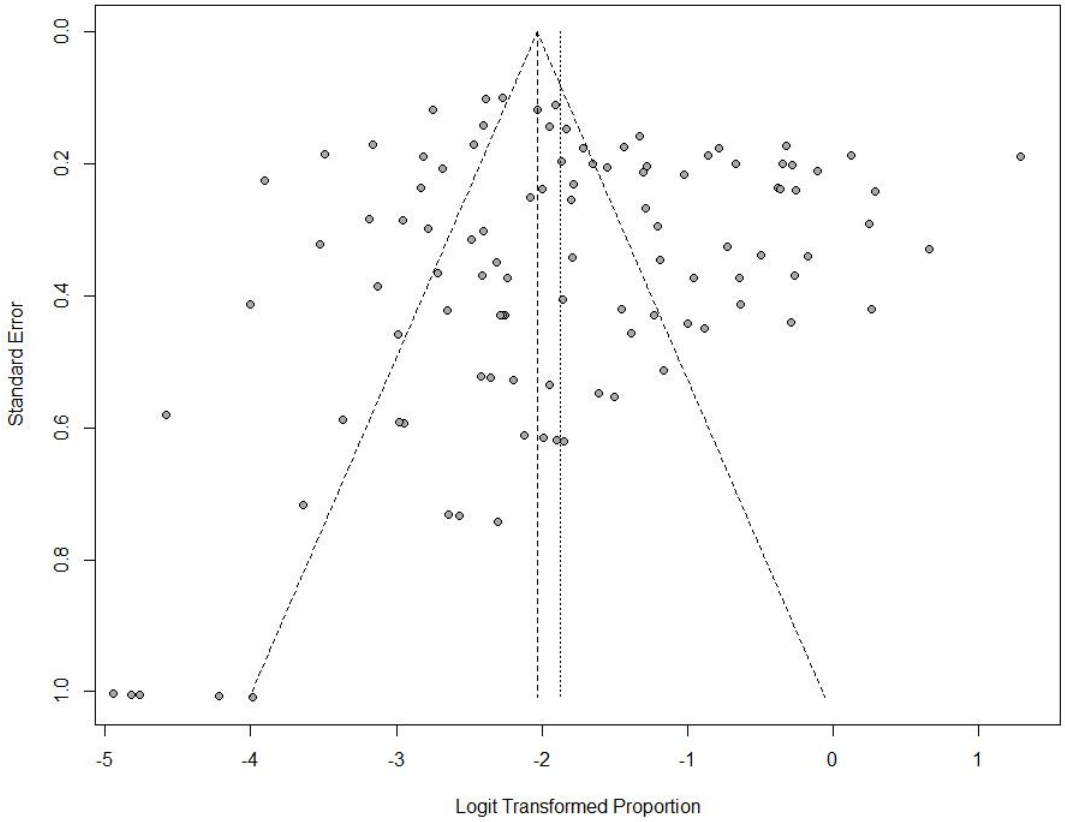
Supplementary figure 5B. Forest plots of meta-analysis on the proportion of the study periods of covert infections among the COVID-19 infections



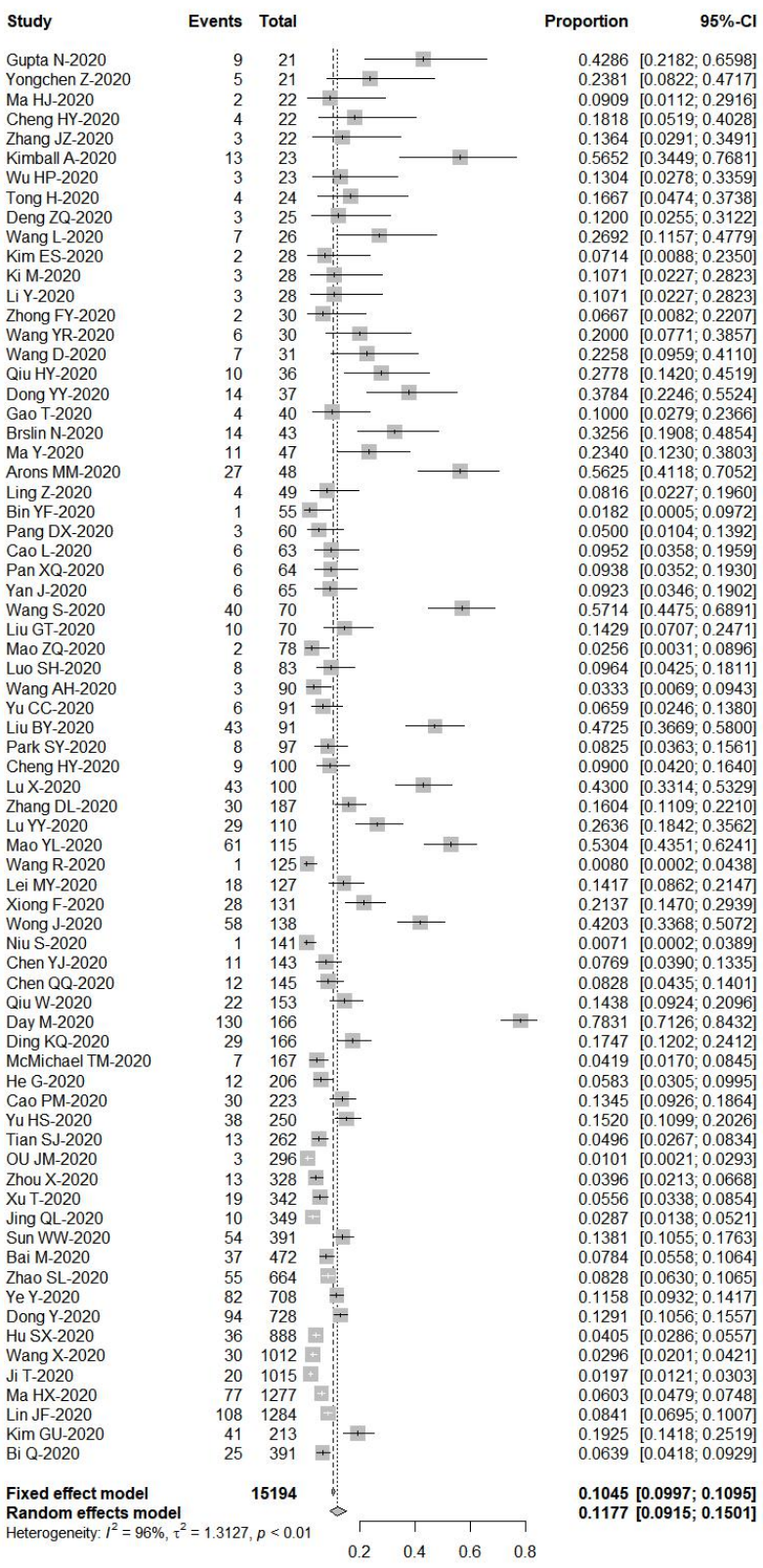
Supplementary figure 5C. Forest plots of meta-analysis on the proportion of the regions of covert infections among the COVID-19 infections



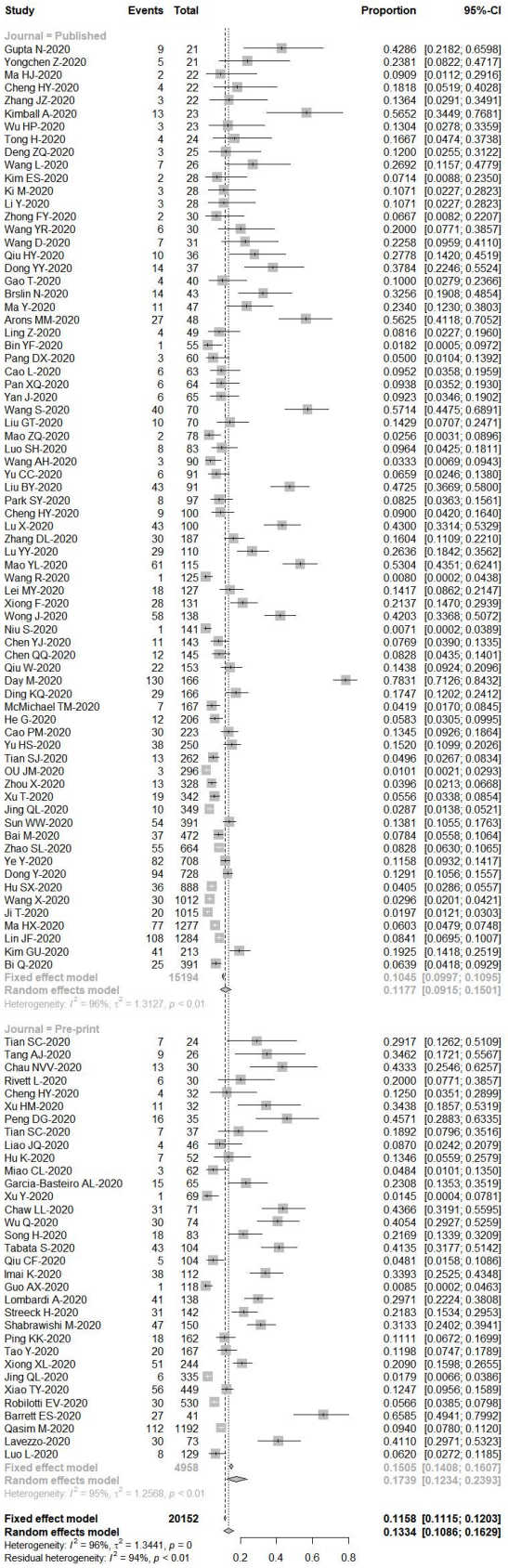
Supplementary figure 6. Forest plots of meta-analysis on the proportion of the radiographical findings among the covert infections



Supplementary figure 7. Funnel plot assessing publication bias in studies reporting the proportion of the the asymptomatic infections with the COVID-19



Supplementary figure 8A. Sensitivity analysis of excluding pre-print studies on overall proportion estimate



Supplementary figure 8B. Subgroup analysis of proportion estimate of pre-print studies and peer-reviewed published articles